

Amendments to the Drawings

Replacement sheet has been filed for FIG. 7.

Remarks

Upon entry of the foregoing amendment, claims 1-4, 8-10, 12, and 18-24 are pending in the application, with claims 1 and 22 being the independent claims. Claims 1 and 12 are sought to be amended, and claims 5-7, and 11 are sought to be canceled. The specification has been amended to correct informalities. These changes are believed to introduce no new matter, and their entry is respectfully requested. Based on the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Drawing Objections

Figure 7 has been amended per the Examiner's suggestion. Accordingly, it is requested that this objection be reconsidered and withdrawn.

Specification Objections

The specification has been amended per the Examiner's suggestions. Accordingly, it is requested that this objection be reconsidered and withdrawn.

Rejections under 35 U.S.C. § 103

Claims 1-4, and 10 stand rejected under 35 U.S.C. 103(a) as being anticipated by U.S. Patent No. 6,212,229 to Salinger (hereinafter "Salinger") in view of Polhemus (U.S. Patent No. 5,337,025). Applicant traverses this rejection based on the discussion below. Claim 1 recites,

A data link system, comprising:

a *differential* transmission line having a *differential* input and a *differential* output;
a transmitter de-emphasis circuit coupled to said input of said transmission line, *said transmitter de-emphasis circuit having an active configuration, and including,*
 a first transconductance device *having a fixed gain;*
 a second transconductance device, coupled in parallel with said first transconductance device, *and having a variable gain;* and
 a summer device for summing current outputs of said first and second transconductance devices; and
 an equalizer coupled to said differential output of said transmission line, *said equalizer having an inductor connected between first and second components of said differential transmission line.*
(Claim 1, *emphasis added*)

The Office Action admits that Salinger does not teach a de-emphasis circuit having first and second transconductance devices in parallel, and therefore relies on Polhemus to teach or suggest these features. Upon review, Polhemus teaches using first and second transconductance devices, but both transconductance devices have a variable gain, (e.g. first variable current stage 24 and second variable current stage 26). In contrast, Applicants claim 1 recites, a first transconductance device having *a fixed gain*, and a second transconductance device...having *a variable gain*. (See, claim 1) Polhemus does not teach or suggest using a combination of fixed and variable gains, nor does the Office Action suggest this.

Further, Applicant's claim 1 further defines that the equalizer includes *an inductor connected between first and second components of said differential transmission line*. The combination of Salinger in view of Polhemus does not teach or suggest this feature, nor does the Office Action suggest this.

Accordingly, based on the discussion above, the combination of Salinger in view of Polhemus does not teach each and every feature of Applicant's claim 1, and therefore does not meet the requirements of *prima facie* obviousness. (See, MPEP 2143A).

Further is noted that the inductor L1 in FIG. 1 of Winget (U.S. Patent 4,275,358) is between a capacitor C1 and ground to provide an impedance Z. (See, Winglet, FIG. 1. col.2, lines 27-3). Since Winglet is using its inductor to create an impedance to ground, then Winglet is incapable of providing an inductor between differential components of a differential transmission line, as the ground potential would prohibit signal transmission on the differential transmission. Therefore, Winglet is incapable of coupling to first and second components of a differential transmission, as recited in Applicant's claim 1, and even teaches away from Applicant's claimed invention. Therefore, any theoretical combination involving Winglet does not support a *prima facie* obviousness rejection. (See, MPEP 2143A)

Accordingly, based on the discussion above, the combination of Salinger in view of Polhemus does not teach each and every feature of Applicant's claim 1, and therefore does not meet the requirements of *prima facie* obviousness. (See, MPEP 2143A). Further, claims 2-4 and 10 depend directly or indirectly from claim 1, and therefore are allowable over Salinger in view of Polhemus for being dependent on an allowable base claim in addition to their own patentable features.

Claims 1-2, 8-10, 19 and 20 stand rejected under 35 U.S.C. 103(a) as being anticipated by U.S. Patent No. 5,579,336 to Fitzgerald *et al* in view of Polhemus. Applicant traverses this rejection based on the discussion below.

Similar to the discussion above, the Office Action admits that Fitzgerald does not teach a de-emphasis circuit having first and second transconductance devices in parallel, and therefore relies on Polhemus to teach or suggest this features. Upon review Polhemus teaches using first and second transconductance devices, but both transconductance devices have a variable gain, (e.g. first variable current stage 24 and

second variable current stage 26). In contrast, Applicants claim 1 recites, a first transconductance device having *a fixed gain*, and a second transconductance device...having *a variable gain*. (See, claim 1) Polhemus does not teach or suggest using a combination of fixed and variable gains, nor does the Office Action suggest this.

Further, Applicant's claim 1 further defines that the equalizer includes *an inductor connected between first and second components of said differential transmission line*. The combination of Fitzgerald in view of Polhemus does not teach or suggest this feature, nor does the Office Action suggest this.

Accordingly, based on the discussion above, the combination of Fitzgerald in view of Polhemus does not teach each and every feature of Applicant's claim 1, and therefore does not meet the requirements of prima facie obviousness. (See, MPEP 2143A). Further, claims 8-10, 19 and 20 depend directly or indirectly from claim 1, and therefore are allowable over Fitzgerald in view of Polhemus for being dependent on an allowable base claim in addition to their patentable features.

Further is noted that the inductor L1 in FIG. 1 of Winglet (U.S. Patent 4,275,358) is between a capacitor C1 and ground to provide an impedance Z. (See, Winglet, FIG. 1. col.2, lines 27-3). Since Winglet is using its inductor to create an impedance to ground, then Winglet is incapable of providing an inductor between differential components of a differential transmission line, as the ground potential would prohibit signal transmission on the differential transmission. Therefore, Winglet is incapable of coupling to first and second components of a differential transmission, as recited in Applicant's claim 1, and even teaches away from Applicant's claimed invention. Therefore, any theoretical combination involving Winglet does not support a prima facie obviousness rejection. (See, MPEP 2143A)

Claims 5-7 stand rejected under 35 U.S.C. 103(a) as being anticipated Salinger or Fitzgerald in view of Polhemus, and further in view of Gilbert. Claims 5-7 have been canceled rendering this rejection moot.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salinger in view of Polhemus and further in view of U.S. Patent Publication No. 2004/0120419 to Gauthier *et al.* Applicants traverse below.

Claim 9 depends directly or indirectly from claim 1. As discussed above, Salinger does not teach or suggest a *transmitter de-emphasis circuit having an active configuration, and including a first transconductance device having a fixed gain, and a second transconductance device, coupled in parallel with said first transconductance device, and having a variable gain* as recited in claim 1. Further, neither Salinger or Polhemus teaches or suggests an equalizer that includes *an inductor connected between first and second components of said differential transmission line*. Gauthier does not cure the defects of the combination of Salinger in view of Polhemus, nor does the Office Action suggest this. Accordingly, the combination of Salinger, Polhemus, and Gauthier does not teach each and every feature of claim 9, and therefore does not meet the requirements of *prima facie* obviousness. (See MPEP 2143A) Therefore, claim 9 is not obvious by the combination of Salinger in view of Polhemus and Gauthier. Accordingly, Applicants request that the rejection under 35 U.S.C. 103(a) of claim 9 be reconsidered and withdrawn and that this claim be passed to allowance.

Claims 11-12 stand rejected under 35 U.S.C. 103(a) as being anticipated Salinger or Fitzgerald in view of Polhemus, and further in view of Winglet. Claim 11 has been canceled rendering this rejection moot.

Claim 12 depends from claim 1. As discussed above, the combination of Salinger or Fitzgerald, and Polhemus does not teach or suggest a *transmitter de-emphasis circuit having an active configuration, and* including a first transconductance device *having a fixed gain*, and a second transconductance device, coupled in parallel with said first transconductance device, *and having a variable gain* as recited in claim 1. Further, the combination of Salinger or Fitzgerald, and Polhemus does not teach or suggest an equalizer that includes *an inductor connected between first and second components of said differential transmission line*. Winglet does not cure these deficiencies.

Regarding Winglet, it is noted that the inductor L1 in FIG. 1 of Winglet (U.S. Patent 4,275,358) is between a capacitor C1 and ground to provide an impedance Z. (See, Winglet, FIG. 1. col.2, lines 27-3). Since Winglet is using its inductor to create an impedance to ground, then Winglet is incapable of providing an inductor between differential components of a differential transmission line, as the ground potential would prohibit signal transmission on the differential transmission. Therefore, Winglet is incapable of coupling to *first and second components of a differential transmission*, as recited in Applicant's claim 1, and even teaches away from Applicant's claimed invention. Therefore, the combination of Salinger or Fitzgerald, Polhemus, and Winglet does not teach or suggest each and every feature of claim 1 or claim 12 and therefore, does not support a *prima facie* obviousness rejection. (See, MPEP 2143A) Accordingly, Applicants request that the rejection under 35 U.S.C. 103(a) of claim 12 be reconsidered and withdrawn and that this claim be passed to allowance.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salinger or Fitzgerald in view of Polhemus and further in view of U.S. Patent No. 5,694,439 to Doyle. Applicants traverse below.

Claim 18 depends directly or indirectly from claim 1. As discussed above, the combination of Salinger or Fitzgerald, and Polhemus does not teach or suggest a *transmitter de-emphasis circuit having an active configuration, and including a first transconductance device having a fixed gain, and a second transconductance device, coupled in parallel with said first transconductance device, and having a variable gain as recited in claim 1.* Further, the combination of Salinger or Fitzgerald in view of Polhemus does not teach or suggest an equalizer that includes *an inductor connected between first and second components of said differential transmission line.* Doyle does not cure the deficiencies of the combination of Salinger or Fitzgerald in view of Polhemus, nor does the Office Action suggest this. Accordingly, claim 18 is not rendered obvious over Salinger or Fitzgerald in view of Polhemus and Doyle. Therefore, the combination of Salinger or Fitzgerald, Polhemus, and Doyle does not teach or suggest each and every feature of claim 1 or claim 18 and therefore, does not support a *prima facie* obviousness rejection. (See, MPEP 2143A) Accordingly, Applicants request that the rejection under 35 U.S.C. 103(a) of claim 18 be reconsidered and withdrawn and that this claim be passed to allowance.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fitzgerald in view of Polhemus and further in view of Doyle. Applicants traverse below.

Claim 21 depends directly or indirectly from claim 1. As discussed above, the combination of Fitzgerald and Polhemus does not teach or suggest a *transmitter de-emphasis circuit having an active configuration, and including a first transconductance device having a fixed gain, and a second transconductance device, coupled in parallel with said first transconductance device, and having a variable gain as recited in claim 1.*

Further, the combination of Fitzgerald in view of Polhemus does not teach or suggest an equalizer that includes *an inductor connected between first and second components of said differential transmission line*. Doyle does not cure the deficiencies of the combination of Fitzgerald in view of Polhemus, nor does the Office Action suggest this. Therefore, the combination of Fitzgerald in view of Polhemus, and Doyle does not teach or suggest each and every feature of claim 1 or claim 21 and therefore, does not support a *prima facie* obviousness rejection. (See, MPEP 2143A) Accordingly, Applicants request that the rejection under 35 U.S.C. 103(a) of claim 21 be reconsidered and withdrawn and that this claim be passed to allowance.

Claims 22-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Salinger in view of Winglet. Applicants traverse below.

Claim 22 recites a data link system where the *transmission line* is *differential*, and so that the *equalizer* includes *an inductor between first and second components of said differential transmission line*. (See, claim 22, emphasis added)

Neither Salinger nor Winglet teaches or suggests or *an equalizer that includes an inductor between first and second components of said differential transmission line*. The Office Action admits that Salinger does not teach this particular feature, and relies on Winglet. However, upon review of Winglet, it is noted that the inductor L1 in FIG. 1 of Winglet (U.S. Patent 4,275,358) is between a capacitor C1 and ground to provide an impedance Z. (See, Winglet, FIG. 1. col.2, lines 27-3). Since Winglet is using its inductor to create an impedance to ground, then Winglet is incapable of providing an inductor between differential components of a differential transmission line, as the ground potential would prohibit signal transmission on the differential transmission. Therefore, Winglet is incapable of coupling *first and second components*

of a differential transmission, as recited in Applicant's claim 22, and even teaches away from Applicant's claimed invention. Therefore, the combination of Salinger and Winglet does not teach or suggest at least the feature of *an equalizer coupled to said output of said differential transmission line, including an inductor between first and second components of said differential transmission line*, as recited in Applicants' claim 22. Therefore, the combination of Salinger and Winglet does not support a *prima facie* obviousness rejection. (*See*, MPEP 2143A) Accordingly, Applicants request that the rejection under 35 U.S.C. 103(a) of claim 22 be reconsidered and withdrawn and that this claim be passed to allowance. Claims 23 and 24 are patentable over the cited art for being dependent on an allowable base claim, in addition to their own patentable features.

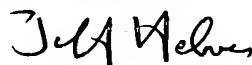
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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